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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,624	02/23/2004	Lawrence Shungwei Mok	YOR920030206US1	8420
7590 12/22/2008				
Thomas A Beck 6136 West Kimberly Way Glenn Dale, AZ 85308				
EXAMINER				
DUONG, THO V				
ART UNIT		PAPER NUMBER		
3744				
MAIL DATE		DELIVERY MODE		
12/22/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/784,624

**Applicant(s)**

MOK, LAWRENCE SHUNGWEI

**Examiner**

Tho v. Duong

**Art Unit**

3744

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 September 2008.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6-9 is/are pending in the application.  
4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-4 and 6 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Applicant's amendment filed 9/2/08 is acknowledged. Claims 1-4 and 6-9 are pending. Claims 7-9 remain withdrawn from further consideration. Claim 5 has been cancelled by the applicant.

#### ***Response to Arguments***

Applicant's arguments filed 9/2/08 have been fully considered but they are not persuasive. Applicant's argument that the "securing device 30" of Lee is improper to read on the fin members since the securing device serves to secure the heat sink on the CPU, has been very carefully considered but is not found to be persuasive. Applicant is reminded that the examiner must interpret the limitation as broadly as it reasonably allows. In this case, the clip (50) is interpreted to read on the fin member since it comprises all of the elements of the fin member such as "each fin member having been formed from a single sheet and folded into a substantially inverse U shape...each said edge having a finger portion" as claimed.

Regarding reference to Bradt, applicant's argument that the reference to Bradt is not relevant to the instant invention, has been very carefully considered but is not found to be persuasive. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, claims 2-3 are rejected in the combination of references Lee's 989 in view of Bradt, wherein reference to Lee substantially discloses all of applicant's claimed invention except for the clip is made of metal. Reference to Bradt discloses a heat sink device that has a clip is made of metal for a purpose of

further conducting heat away from the heat source since metal has a relative high thermal conductivity.

Regarding reference to Lin's 578, applicant's argument that reference to Lin is in different technology from both references Lee and Bradt, has been very carefully considered but is not found to be persuasive. Clearly, all of the references of Lee, Bradt and Lin are in the same field of endeavor, which is chip's cooling apparatus. Applicant's further argument that there is no suggestion to combine the references, has been very carefully considered but is not found to be persuasive. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it is well known in the art that thermal adhesive or solder material are used to secure two components together. Furthermore, the motivation of using solder material or thermal adhesive can be found in reference to Lin, which is to secure two components and enhance the thermal conduction between two components. (column 3, lines 35-40 and column 4, lines 5-13).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the ambient heat dissipation device" in line 27 (the last line of the claim). There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "said fin member" in line 10. There is insufficient antecedent basis for this limitation in the claim.

Claims 1-4 and 6 are further rejected as can be best understood by the examiner in which "the ambient heat dissipation device" is the "heat dissipation device recited in at line 1 and "said fin member" refers to one of the "plurality of support fin members" at line 7.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al. (US 6,008,989). Lee discloses (figure 5 and column 3, lines 17-19) a heat dissipating device comprising a CPU module (70) mounted on a PCB (printed circuit board) forming a combination comprising an area; a modular assembly of a plurality of support fin members (50) aligned side by side; the support fin members being horizontal and vertically alignment with one another and covering ; each of the support fin member formed from a single sheet and folded into a

substantially inverse U-shape, each fin member (50) having first and second side arms (52) diametrically opposite each other; the side arms having an inside surface and an outside surface and an edge, each the edge having a finger portion (53); a plurality of parallel beam members (18) made from heat conductive material, each beam member having top, bottom and first and second side walls, the side walls of the beam member being positioned between and in contact with the inside surface of the side arms; the finger portion (53) of the edge extending below the bottom wall of the beam member and being folded inwardly toward a center line of each of the beam member into a bent position to form a contacting support structure which is a compliant interface in contact with the heat source to dissipate heat emanating from the heat source to the heat dissipation device.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Bratt (US 5,909,358). Lee substantially discloses all of applicant's claimed invention as discussed above except for the limitation that the support fin member is made of aluminum or copper or graphite fiber composite sheet with thickness in a range of 0.01 to 5 mm. Bratt discloses (figure 4 and column 4, lines 63-68) a fin support member (38) that is made of resilient material sheet such as metal including copper bronze or any other equivalent metallic material that is 0.03 inches thick for a purpose of obtaining a springy fin support member and further

conduct heat away from the heat source since metal has a relative high thermal conductivity. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Bradt's teaching in Lee's device for a purpose of obtaining a springy fin support member and further conducting heat away from the heat source since metal has a relative high thermal conductivity.

Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Bradt as applied to claim 1 and 3 above, and further in view of Lin et al. (US 6,188,578). Lee and Bradt substantially disclose all of applicant's claimed invention as discussed above except for the limitation that the first and second arms being fixed to the beam member by a technique consisting of soldering, brazing, welding or gluing and there is a solder or resilient or grease disposed between the fin support member and the beam member. Lin discloses (figure 1 and column 3, lines 19-60) that a thermal adhesive or solder material (15,17) is disposed as a thermal interface between two heat exchanger surfaces such as fingers (132) and body (11) or heat source (12) for a purpose of securing two surfaces together while providing an efficient heat transfer path between two surfaces. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use solder or thermal adhesive as taught by Lin in the combination device of Lee and Bradt for a purpose of securing two surfaces together while providing an efficient heat transfer path between two surfaces. Regarding the method of forming the device "soldering, welding, brazing or gluing" is not germane to the issue of patentability of the device itself. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made

by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). In this case, solder material and a thermal conductive adhesive (15,17) have been used to secure two surfaces.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v. Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tyler J. Cheryl can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tho v Duong/  
Primary Examiner, Art Unit 3744